

E-LEARNING IMPLICATIONS FOR ADULT LEARNING

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ABSTRACT

If a few decades ago, *the education received in school could be in most of the cases enough to go with for the rest of one's entire life*, today the situation has changed dramatically. The individual has to be prepared for a new type of life and training, namely lifelong learning. The individual's survival in society could depend on his capacity to learn, to re-qualify, to forget what he once learned and to train for the future in an entirely different manner. Within this context, e-learning and distance education can be viable alternatives for the necessary and imperative adaptation process. Modern man's education has to go beyond the stage of level oriented education (limited in terms of trainee number and training duration) and advance towards continuous education, which is able to train the individual irrespective of his location and with no limitations in terms of time. The passage towards the information society involves mutations in the object of the activities, mainly in terms of selecting, storing, preserving, managing and protecting information.

Against this extremely fluctuant background, a relevant question rises: is the adult capable of coping, both individually and socially, with the challenge of e-learning?

Keywords: Adult learning, e-learning, learning styles.

INTRODUCTION

The society we live in defines itself through constant dynamics, with deep consequences on each individual; many of these consequences are determined by permanent and accelerated change. At present, the individual is compelled to live in a fluid environment which most of the times ends up being perceived as a hostile environment. Some of these changes are: *the change in the nature of the workplace* – if until recently an individual had *one job only* during his entire life, with a change possibility reduced enough to allow him to form a natural adaptation reflex, today's jobs or the work profile change around each five years on the average, with dramatic alterations of work field.

NEW PERSPECTIVES IN ADULT EDUCATION

The history of adult education indicates four approaches for analysing it: education as a practical training for an individual's career and professional life; education as an activity meant to enhance life quality; education as a form of democratic activity; education as a form of social action.

In 1992, Baxter Magolda suggested an extremely interesting approach which continues one of the classical theories of learning, namely Piaget's epistemology.

According to Baxter Magolda, the individual's intellectual development and his capacity to learn can be analysed along four stages in his development. The first stage, that of childhood, is completely covered by Piaget's genetic epistemology and the four classical stages in the child's cognitive development. The other three stages suggested by the above mentioned author correspond to the *young adult, the adult and the aged adult*. Thus, learning in each of these stages has particular features which can be used in the process of planning e-learning.

To the *young adult*, knowledge and learning retains an absolute nature, in that such processes are still easy to achieve (as they are in childhood and adolescence), while the efficiency of learning is high. Also, knowledge is transitional and facilitates the understanding and the implementing of the acquired knowledge. Equally, educational activities are *independent* in nature, they are means to develop personal perspectives, as well as *contextual* in nature, as they enable collaborative learning and situational learning (Jordan, Carlile, Stack, 2008, p.124).

In the case of the adults, learning is valuable since it has an important axiological element, which requires a clarification of the elements related to this aspect. Adults can more easily *tolerate contradictions and ambiguities*, as they are more clearly inclined towards a *practical and reflexive approach to knowledge*. Equally, the adult learner *accepts diverging viewpoints more easily*, can integrate contradictions into a unifying perspective, which fosters debate and a critical approach to problems. At the same time, the adult learner frequently demonstrates *an intuitive understanding of problems*, starting from his personal life experience (Jordan, Carlile, Stack, 2008, p.125).

For the aged adult, learning is beneficial since it significantly reduces cognitive decline. Intellectual activity in general and the learning process in particular represent important anchors to increase the aged adult's life quality. It is generally thought that the next significant move on the educational services market will be directed towards providing specialised services for the aged adults (Jordan, Carlile, Stack, 2008, p.125). Obviously, in this context, the role of computers can significantly heighten its importance.

The differences between adults and children regarding learning are multifarious. It is well known that children have little life experience and in their case learning focuses on accumulating skills, values, learning strategies and basic knowledge.

Adults have already accumulated various types and amounts of information and life experience, which they then transfer into their learning situations. They abide by certain principles, values, beliefs acquired along the time.

The learning process focuses on changing, transforming or expanding (learning or work) values, competences and strategies they have acquired up to that moment. Learning motivation in children is different: their need is to be prepared for their professional life, to socialize appropriately; they have a passion to learn. Adults are motivated by the latest requirements imposed by society, by the wish to be promoted in their profession, as well as by their thirst for knowledge.

Children's need for learning is related to the development of the patterns necessary for the understanding of the world. On the other hand, the adult's need to learn is related to the specific contexts in which he is placed and the way in which he wants to apply his newly acquired knowledge to the problems or situations he is facing at a particular moment.

Children's nonverbal actions express their needs to learn and they force the teacher to alter the lesson plan or the teaching methods if they do not satisfy these needs. Adults can express their learning needs and can negotiate the learning conditions, the rules, the content and the methods with the trainer. During the learning process, children are centred on the content of the discipline they are being taught, while adults focus on the problem to be solved, on the life situation, on the requirements. Moreover, children, do not have a well developed concept of the self, this allows them to perceive themselves as individualities which, however, depend on others. Adults have a well developed self esteem and concept of the self which allow them to take part in group tasks and, at the same time, to manifest themselves independently. Unlike children, who do not have major responsibilities at a social level, adults have to be responsible both in their professional and in their family environment?

Within this context, the role of the trainers in adult education has to centre on: the creation of a climate which fosters cooperative learning; the help offered to the students to identify their training needs and set their learning objectives; validating the relevance of the content taught; the introduction of the learning activities as tasks which have to be undertaken or as problems which need to be solved; creating contexts specific to self directed teaching; stimulating the trainees' capability to design learning activities and to assess themselves; the use of the trainees' experience as a teaching aid; the creation of optimal conditions to identify each participant's learning style; the implementation of collaborative learning strategies, group discussions, the completion of case studies, projects, team study.

ADULT LEARNER PROFILE IN E-LEARNING

Li and Irby (2008, pp. 450-451) differentiate three categories of adults who are interested in participating in on-line courses: employed individuals who strive for promotion, individuals whose activity does not allow for a regular schedule, and parents with children, who, due to their family responsibilities, cannot attend a face-to-face form of training. The authors mentioned above regard e-learning as "a vehicle to facilitate access to the underserved populations, but also expands student access to universities that are not in their geographical area including international locations".

The advantages of this model are obvious, there are, however, numerous opinions critical of this model. Phenomena like the digital-divide greatly limit the number of the adults that can benefit from e-learning, just as financial and technological access constraints limit the width of this form of education. An example in this respect is the programme of online continuous training implemented starting with 2010 by the Alexandru Ioan Cuza" University of Iasi created mainly for adult teachers in kindergartens and primary school in remote rural areas.

Of all the 1300 teachers who expressed an interest in this form of learning, more than 75% declared at the beginning of the project that they did not have the required computer skills to complete this type of training.

Therefore, technology is found here in the position of a factor that offers the adult learner opportunities which, on the one hand, are new in that they use computers to a great extent, yet, on the other, they observe the principles of classical andragogy, as they have been describes by Malcom Knowles.

Thus, the non directive approach, voluntary learning in time and space, both emotional and intellectual involvement, reflexivity are features of adult learning that can be clearly identified within virtual learning as well.

There are also statistical data emphasizing that, among the students who have chosen e-learning as the form of training, the dropout rate is much higher than that in the case of face-to-face learning, while the level of performance is lower. For many of the trainees in the e-learning form, developing certain skills such as the ability to produce a text, communication skills in the virtual environment and the ability to work independently are extremely important.

Other individual features and skills to be considered are the learning style and the cognitive style. Learning throughout one's life in diferent contexts may be indicative of the fact that adults can be better motivated for this type of activity, as they have better knowledge of the weak and strong points of their own learning activity. Learning style seems to play an extremely important part in the adult's learning process within the context of e-learning. Starting from the Myers-Briggs Indicator of the personality type (IMBTP) (Myers-Briggs, 1993), Soles and Moller (1999) have defined a set of styles that can characterize the learning adult within the context of e-learning.

In brief, these are the styles:

- The *extraverted adults* enjoy team work and collaborative learning; in an e-learning context, they find themselves in a competitive, stimulating environment. In terms of communication, extraverted people prefer synchronous learning and communication.
- For the *introverted adults*, e-learning and online activities may present the opportunity to accumulate information from various sources, which they then organize within general frameworks related to the learning situation. Thus, asynchronous communication seems to suit this personality type better.
- In e-learning, the *sensory* type needs well structured courses, with clearly set, precise instructions. The representatives of this type follow the work tasks and objectives in detail, while in a collaborative context they can play the part of the group organizer, whether in face-to-face or in distance mode. Adults of this type can suggest accurate step-by-step methods to solve problems and from this point of view they may prefer asynchronous situations that allow them to respond in their specific mode – well organized, with an eye for the minute detail.
- The *intuitive adult* will find in e-learning countless possibility to test his anticipations and intuitions in an attempt to create a general perspective of the domain. From this point of view, a combination between the synchronous and the asynchronous can prove beneficial. The internet provides unlimited opportunities to discover and explore, to create new meanings, to develop new learning experiences.

- The *reflexive* type can appreciate the e-learning situation if it reproduces the pattern of a traditional course with specific aims and objectives, evaluation and activities. The adults belonging to this type can respond well to tasks such as case studies, solving logical and cause-effect problems. The learning contracts can make the representatives of this type define purposes and expectations clearly, which can enhance their motivation. Generally, however, the reflexive type does not respond very well in the e-learning context.
- The *affective* type places much emphasis on personal values and sentiments and, within an e-learning context; they can be appreciative of small team activities. The constructivist approach offered by e-learning can be enjoyed by the representatives of this category; however, they may experience the absence of face-to-face interactions in a negative way. From this point of view, the synchronous learning and communication environment are much appreciated by this category.
- The *rational* type focuses on the task, strives to learn the essential and acts fast. E-learning can be an advantageous environment for this type of adult, helping him to manifest his abilities to plan work and to keep deadlines, which are two of his strong points.
- The adults belonging to the *perceptive* type are inquisitive, adaptable and spontaneous. E-learning can be another opportunity to satisfy their inquisitiveness, while synchronous communication is by far the best choice in their case.

It should, however, be kept in mind that there is no "pure" personality type, defined only through one or other of these criteria. Human personalities are complex and, despite the preeminence of one type over the others, they form at the intersection between a set of several criteria. From a combination of these criteria on the basis of factor analysis and through a synthesis of the characteristics, Soles și Moller have suggested four personality types, each characterized by one type of learning. Within an e-learning context, these styles imply a differentiated approach, while the training strategies must depend on the characteristic features of these types.

The Table: 1

Below presents the four learning types and the activities in e-learning which best respond to the specificity of these personality types

Personality type (after IMBTP)	Personality type according to learning type	E-learning training
Extraverted Intuitive	Auditory-based on listening and unmediated discussion	Videoconferencing, synchronous <i>on line</i> activities, software and programs with many users, long distance collaboration
Introverted Sensory Reflexive	Visual-learning through description and demonstration	Computer assisted training, video conferencing, both synchronous and asynchronous activities and communication
Extraverted/ Introverted Sensory Reflexive	Tactile-learning based on touching and manipulating	Computer assisted training requiring the manipulation of the equipment, searching for information on the Internet, synchronous <i>on line</i> activities
Extraverted Intuitive	Kynesthetic-learning of movement and through movement	This type can have difficulties with e-learning, which does not respond to its specific characteristics

(after Soles, Moller, 1999)

Relying on the theory presented above and in order to get a better understanding of their trainees, trainers as well as the creators of training instruments and strategies have to consider the multiples variables involved, such as learning styles, age, interests, educational levels. In this way, alternative activities can be devised to match the various learning styles.

On the other hand, the trainers' individualized, tailored response to such capabilities at various levels of development can lead to faster retention, better reinforcement, better and faster retrieval of information. In other words, "learning how to learn" can represent the phrase equivalent to success within the framework of e-learning.

Such elements demonstrate that e-learning cannot be used by any participant in the training process.

The above mentioned capabilities, paralleled by ICT skills as well as the technological condition (in terms of computers and of IT infrastructure) outline the profile of an adult learner who needs an array of skills to successfully attend such a training program.

E-LEARNING AND ADULT EDUCATION

The need to use e-learning in a knowledge society, which prompts the adult to permanently strive to achieve professional development, is emphasized by H. Siebert (2001) using the following arguments:

- scientific information becomes obsolete at an increasingly quicker pace;
- an increasing number of people are involved in producing science: among them are the people in the pedagogical professions, in consulting, high tech, scientific journalism;
- producing and mediating science are international and global processes;
- the competitive capacity of many entrepreneurs depends firstly on efficient knowledge management and the efficient management of their own learning capabilities ("learning organizations");
- the boundaries between "general background knowledge" and "professional knowledge" become blurred and are easy to cross. The economic importance of "soft skills" (personal, social, emotional, communicational competences) is increasing;
- lifelong learning becomes a professional competitive element and a necessity in personal life. Thus, the role of self directed learning skills is increasingly significant;
- from a didactic point of view, mediating knowledge (traditional learning) becomes less important than counselling for learning and the creation of learning environments ("the new learning cultures");
- the systemic-constructivist paradigm becomes generally accepted in pedagogy as well, at the expense of the compormental-technological concepts;
- modern educational policy is a "continuous learning policy" and not just a "school learning policy".

The tendencies anticipated for adult learning within higher education institutions intersecting the requests regarding the development of e-learning are (after Navid, Slusky, 2005, pp. 219-220):

- **the accessibility of this form of education: transparency based on global networks that will make future interactive courses more convenient and more interesting than those in the auditorium;**
- **registering for the e-learning system is both comfortable and fast;**
- **opportunities for profit through e-learning are starting to attract corporations and entrepreneurs competing with the universities in training companies' employees; training tailored to the needs of the employer is achieved and completing these courses takes shorter;**
- **adult students represent the educational demographic group with the most dramatic increase; this increase results in a change in the educational culture of universities in that it implies an increase in importance of adult education and a boost of the concept of lifelong education. Adult students prefer part-time courses, require greater flexibility in terms of time and can be more easily counselled when they choose from the educational offer;**
- **an increase in the cost of education, paralleled by the difficulty in ensuring the necessary funding for education at the social level turns e-learning into a viable and attractive option;**
- **education has to adapt to the requirements of an open, extremely competitive market where the unified structures of traditional universities will compete with new open universities; due to their flexibility, the latter can offer their clients better services, shorter time to acquire the credits necessary for graduation, good quality curricula and better adjustment to the requirements of the market;**
- **the need for increasingly higher competences, such as supercomputers, networks, biotechnologies and nanotechnologies, will create opportunities for new universities on the education market, provided they can adjust fast to these new requirements;**
- **each higher education institution that wishes to remain competitive needs to evolve in an e-business environment: by communicating, offering services and Web courses;**
- **the speed and ability to incorporate and use state-of-the-art technologies will ultimately determine the success, standing and efficiency of the higher education institutions.**

The educational potential offered by e-learning in adult education is supported by an increasing number of arguments related to the initiatives taken at the level of educational systems-especially in higher education, within universities that have developed an infrastructure which favours the use of virtual learning systems.

By means of e-learning, adult trainees develop their self directed teaching skills and take the responsibility for their own learning process, which prompts them rather to create ways to produce knowledge and less to follow a linear training model defined through the control exercised by the trainer.

In the digital era, learning systems have to allow adult trainees to embark on the educational process by any means and thus to establish links between learning platforms (such as Blackboard or Moodle), so that they can be easily integrated in distance training models. According to Ingvarson and Gaffney (2008, p. 152), digital learning systems "can provide a more responsive, personalized, effective, equitable and efficient learning experience for each student.

This vision of healthy digital ecosystems remains elusive at this stage, and unless the way they are designed and informed by educationally sound rationales to justify what they are attempting to achieve, we may end up wasting resources and developing 'sick digital ecosystems' that contain the pathological entities intent on undermining the vision and culture of the school or system". The use of e-learning in adult education must observe certain implementation and structuring rules:

- **E-learning should not be a mass of online material for individual access without guidance on how to learn from it effectively;**
- **Courses involving e-learning need to be planned for, and grounded in an understanding of the roles of teachers and learners, of learning, and of how students learn;**
- **The role of prior knowledge in learning is critical and must be taken into account in e-learning design, and therefore, ongoing formative assessment is part of this;**
- **As the brain is a dynamic organ shaped by experiences, then conceptual links are reorganized through active engagement with information in various contexts;**
- **Learning is an active process, and is the result of carrying out particular activities in a scaffolded environment where one activity provides the step up to the next level of development;**
- **Learning needs to be meaningful to learners and they should be supported in developing the skill of relating new material to what is meaningful to them;**
- **Learners should be enabled to become adaptable and flexible experts in their own current and future learning;**
- **Learning takes time and effective learning practices enable learners to work with materials from a variety of perspectives while they become fully conversant with it;**
- **Weaving e-learning into existing teaching and learning practices adds more ways for students to be actively and deeply involved with subject area materials". (NZCER, 2004, pp. v-vi).**

Obviously, in this new learning environment, the roles of the trainer and the trainee change compared to those in the classical learning paradigm. On one hand, the trainees are no longer bound to the exigencies of a traditional school and develop their personal and learning characteristics (self directed learning, virtual media communication skills, technological skills regarding the use of computers) and, on the other hand, the trainers detach themselves from the classical teacher model and become facilitators and companions of the learning activities of other adults. Even under these new circumstances provided by the virtual environment, the key to the learning activity remains the interaction between students, between students and trainers, collaborative learning, the use of technology with the purpose of generating new learning contents.

Thus, a new idea emerges, which once more emphasizes the change of roles of the two educational actors. In on-line adult training, instructional strategies are often more important than the technology itself. Unlike the classical educational model where the educational experiences are imagined and devised by the teacher, in on-line education, the learning experiences become the trainees' "quasi-individual educational constructs".

The tutor is the person that can create general and relatively uniform conditions for all the trainees, yet, the actual learning situation is created through the co-participation, communication and sharing all these individual educational constructs. The result is thus the creation of learning communities which are different from the traditional ones, limited as they are to the classroom. Such communities absorb some of the characteristics of each participant and attach themselves to the virtual environment where interaction and learning occur.

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REFERENCES

Baxter, M. M. (1992). Students' epistemologies and academic experiences: implications for pedagogy, *Review of Higher Education*, 15(3): 265–87.

Ingvarson, D., & Gaffney, M. (2008). Developing and Sustaining the Digital Education Ecosystem: The Value and Possibilities of Online Environments for Student Learning. In M. Lee & M. Gaffney (Eds.), *Leading a Digital School*. Camberwell, VIC: ACER Press, (pp. 146-167)

Jordan, A., Carlile, O., & Stack, A. (2008), *Approaches to Learning. A Guide For Teachers*, McGraw-Hill Education Open University Press.

Li, C. And Irby, B. (2008), An overview of online education: attractiveness, benefits, challenges, concerns and recommendations. *College Student Journal*, 42 (2), 449-58.4.

Myers, B. I. (1993). *Introduction to Type*, Consulting Psychologists Press.

Navid, P. P. and Slusky, L. (2005). "Change management and distance education" in Caroline Howard, Judith V. Boettcher, Lorraine Justice, Karen Schenk, Patricia L. Rogers, Gary A. Berg, *Encyclopedia of Distance Learning*, Idea Group Reference, Hershey, pp. 218-223

New Zealand Council for Educational Research (NZCER). (2004), *Critical Success Factors and Effective Pedagogy for e-learning in Tertiary Education*. Retrieved from www.itpnz.ac.nz/reports/NZCER_Final_Report_Critical_Success_Factors.pdf

Siebert, H., (2001), *Autoînvățare și consilierea pentru învățare*, Ed. Institutul European, Iasi

Soles, C. and Moller, L. (1999). Myers Briggs Type Preferences in Distance Learning Education. *IJET-International Journal of Educational Technology*, 2(2).